

PP-43

Metabolic characterization of indigenous medicinal plant *Leucas biflora* by GC-MS analysis

Anwasha Chatterjee, Mayukh Acherjee, Bijan. K. Das, Harshata Pal

Amity Institute of Biotechnology, Amity University Kolkata, Major Arterial Road
(South-East) Action Area II, Newtown, Kolkata-700135, West Bengal, India
Email: anwasha05@gmail.com

Exploration of biodiversity for the identification of biologically active molecules that might have therapeutic potential is a continuous ongoing process of drug development and research. Indian traditional therapies have been used as a part of our lifestyle for ages. Historical text, traditional knowledge, ethnobotany or ethno pharmacological studies are proving to be a powerful tool for searching lead molecules for the development of new drugs. Plants of genus *Leucas* (Lamiaceae) have been used as ethno-medicinal plant to cure many diseases. *Leucas biflora* is very rare among the genus *Leucas*. Our objective of this experiment was to identify and characterize the metabolites present in the crude methanolic extract of indigenous medicinal plant *Leucas biflora* and check its anti-bacterial effects. Air-dried whole plant was extracted using methanol and the extract was subjected to Gas chromatography-Mass spectrometry (GC-MS). The extract was further used in the Disc-diffusion assay to determine the anti-bacterial effects. The GC-MS result revealed nine different types of high and low molecular weight chemical entities with varying quantities present in the extract. These entities are considered to be biologically active and among the nine biologically active compounds, three of them have been reported to have pharmacological roles. The results of Disc-diffusion assay revealed that the *Leucas biflora* extract is possessing anti-bacterial effects and is noted to be more effective against gram-negative bacterial strain of *E.coli* than gram positive bacterial strain of *B. subtilis*. The results obtained from this study gave a detailed insight about the phytochemical profile which could be further exploited while developing plant based drugs in future.